

What is claimed is:

1. A multiple-screen display having one-screen constituted by combining plural N of image display devices, comprising a characteristic data memory means, a compensation data memory means, and a video signal correction processing means, corresponding to respective image display devices, and a compensation data calculator means common with plural N of image display devices, the characteristic data of the corresponding image display device being stored in the characteristic data memory means, the compensation data calculator means being constituted in such a manner that the compensation data of respective image display devices are calculated collectively, based on the characteristic data stored in all characteristic data memory means, to store these compensation data in the corresponding compensation data memory means, and the input video signals being displayed by compensating and processing them in respective image display devices, by the video signal correction processing means, based on the compensation data stored in the corresponding compensation data memory means.

2. A multiple-screen display having one-screen constituted by combining plural N of image display devices, comprising a characteristic data memory means, a compensation data calculator means, a compensation data memory means, a communication means and a video signal correction processing means, corresponding to respective image display devices, the characteristic data of the corresponding image display device being stored in the characteristic data memory means, all image display devices being able to be connected with mutual communicable through the communication means, the compensation data calculator means is constituted in such a manner that the characteristic data stored in the characteristic data memory means of all image display devices are taken in, and the compensation data of the corresponding image display means are calculated based on these characteristic data, to store these compensation data in the compensation data memory means, and the input video signals being displayed by compensating and processing them in respective image display devices, by the video signal correction processing means, based on the compensation data stored in the corresponding compensation data memory means.

3. A multiple-screen display having one-screen constituted by

combining plural N of image display devices, comprising a compensation data memory means, a video signal correction processing means and a portable record carrier, corresponding to respective image display devices, and a compensation data calculator means having a record carrier reading function and common with N image display devices, the characteristic data of the corresponding image display device and the identification code of said image display device are recorded in the record carrier, the compensation data calculator means is constituted in such a manner that the compensation data of respective image display devices are calculated collectively, based on the characteristic data obtained by reading all record carriers and identification codes, to store these data and codes in the corresponding compensation data memory means, and the input video signals being displayed by compensating and processing them in respective image display devices, by the video signal correction processing means, based on the compensation data stored in the corresponding compensation data memory means.

4. A multiple-screen display having one-screen constituted by combining plural N of image display devices, comprising a compensation data memory means, and a video signal correction processing means, corresponding to respective image display devices, a data base accessible through the network, and a compensation data calculator means capable of being connected to the networks and common with the N image display devices, the characteristic data of respective image display devices and the identification code of said image display device are recorded in the data base, the compensation data calculator means is constituted in such a manner that the compensation data of respective image display devices are calculated collectively, to store the compensation data in the compensation data memory means, based on the read information obtained by reading all characteristic data and identification codes from the data base through the network, and the input video signals being displayed by compensating and processing them in respective image display devices, by the video signal correction processing means, based on the compensation data stored in the corresponding compensation data memory means.

5. A multiple-screen display having one-screen constituted by combining plural N of image display devices, comprising a characteristic data

memory means, a compensation data calculator means, a compensation data memory means, a communication means, a video signal correction processing means, and a process start instruction means, corresponding to respective image display devices, the characteristic data of the corresponding image display device being stored in the characteristic data memory means, all image display devices being able to be connected with mutual communicable through the communication means, the image display device corresponding to the said process start instruction means being assumed to be a master, and other image display means being assumed to be a slave, by activating the process start instruction means in the arbitrary image display device, the characteristic data stored in the characteristic data memory means of all image display devices are taken in by the means for calculating the characteristic parameter of the above master, and the characteristic parameter of respective image display devices is calculated collectively, and the calculated parameter is supplied to the compensation data calculator means of the corresponding image display device, the compensation data of the image display device being calculated to store these data in the corresponding compensation data memory means, based on the characteristic parameter supplied to the respective compensation data calculator means and on the characteristic data stored in the corresponding characteristic data memory means, and the input video signals being displayed by compensating and processing them in respective image display devices, by the video signal correction processing means, based on the compensation data stored in the corresponding compensation data memory means.

6. A multiple-screen display having one-screen constituted by combining plural N of image display devices, comprising a characteristic data memory means, a compensation data memory means, and a video signal correction processing means, corresponding to respective image display devices, a layout information memory means for storing the layout information showing the layout position of the N image display devices, a compensation data calculator means common with N image display devices, the characteristic data of the corresponding image display device being stored in the characteristic data memory means, the compensation data calculator means is constituted in such a manner that the compensation data of respective image display devices are

calculated collectively, based on the characteristic data and layout information stored in all characteristic data memory means and the layout information memory means, respectively, to store these compensation data and layout information in the corresponding compensation data memory means, and the input video signals being displayed by compensating and processing them in respective image display devices, by the video signal correction processing means, based on the compensation data stored in the corresponding compensation data memory means.

7. A multiple-screen display as claimed in claim 2, wherein the identification codes of respective image display devices are stored in the layout information memory means.

8. A multiple-screen display as claimed in claim 1, wherein the characteristic data sequentially displays a specific image to the corresponding image display device by different luminance, and the characteristic of the respective display images is displayed by the image characteristic detecting means.

9. A multiple-screen display as claimed in claim 8, wherein the image characteristic detecting means contains any one of a CCD camera, a video camera, a colorimeter and a photo-electronic sensor.

10. A multiple-screen display as claimed in claim 1, wherein the characteristic data has the luminance value at plural input levels including 100% luminance and 0% luminance of respective colors of red (R), green (G), and blue (B) at every the block obtained by dividing the corresponding display area of the image display device into a plurality of blocks, the compensation data calculator means calculates the compensation data of respective colors of respective blocks collectively in such a manner that when the minimum values at 100% luminance of respective colors in  $k$  ( $k=1-N$ ) th image display device are assumed to be R-White( $k$ ), G-White( $k$ ), and B-White( $k$ ), and the maximum values at 0% luminance are assumed to be R-Black( $k$ ), G-Black( $k$ ), and B-Black( $k$ ), minimum values R-Whitemin, G-Whitemin, and B-Whitemin of R-White( $k$ ), G-White( $k$ ), and B-White( $k$ ), ( $k=1-N$ ), and maximum values R-Blackmax, G-Blackmax, and B-Blackmax of R-Black( $k$ ), G-Black( $k$ ), and B-Black( $k$ ), ( $k=1-N$ ), are extracted, and in the case of R-Whitemin, G-Whitemin, and B-Whitemin at 100% luminance of a respective color of a respective image display device, and in the

case of R-Blackmax, G-Blackmax, and B-Blackmax, at 0% luminance, a required  $\gamma$  characteristic curve is obtained.

11. A multiple-screen display as claimed in claim 10, wherein the given  $\gamma$  characteristic curve is an average  $\gamma$  characteristic curve, in case of correcting the R-Blackmax, G-Blackmax, and B-Blackmax as lower limit, and in case of correcting the R-Whitemin, G-Whitemin, and B-Whitemin as upper limit.

12. A multiple-screen display as claimed in claim 10, wherein the R-Whitemin, G-Whitemin, and B-Whitemin and/or the R-Blackmax, G-Blackmax, and B-Blackmax are made equal.

13. A multiple-screen display as claimed in claim 11, wherein the R-Whitemin, G-Whitemin, and B-Whitemin and/or the R-Blackmax, G-Blackmax, and B-Blackmax are made equal.

14. A multiple-screen display as claimed in claim 1, wherein the compensation data calculator means calculates the compensation data in such a manner that the  $\gamma$  characteristic curve are made equal at the left end and the right end and at the upper end and the lower end of the display screen of respective image display devices.

15. A method of controlling a multiple-screen display having one-screen constituted by combining plural N of image display devices, comprising: a step of storing characteristic data obtained by capturing the screen of respective image display devices displayed by the test image previously, a step of calculating the compensation data of respective image display devices based on the characteristic data of the N image display devices after the layout of the plural N of image display devices, and a step of setting the calculated compensation data to respective image display devices.